Chapter 7
Mobile Cloud Computing Future
Trends and Opportunities

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ABSTRACT

Due to wide variety of smart phones and capability of supporting heavy applications their demand is increasing day by day. Increase of computation capability and processing power Mobile cloud computing (MCC) becomes an emerging field. After cloud computing mobile cloud provide significant advantage and usage with reliability and portability. Challenges involved in mobile cloud computing are energy consumption, computation power and processing ability. Mobile cloud provides a way to use cloud resources on mobile but traditional models of smart phones does not support cloud so researchers introduce new models for the development of MCC. There are certain phases that still need improvement and this field attracts many researchers. Purpose of this chapter is to analyze and summarize the challenges involved in this field and work done so far.

INTRODUCTION

Over the past years, computing in cloud is becoming as advanced as it endorsed software for the devices operated on internet. It provides a lot of utility ways for the user to access any application as they want. Now people are using more reliable ways to use software’s being a service on a cloud instead the install all the infrastructure on their own machines. As we know that Cloud structure consists of many datacenters and they are also maintained by providers. The providers such as Google, Amazon, and Microsoft provide their services to consumers on demand and they have maintained it on the cloud at different locations (S. Prerez, 2009). All in all severe crashes and failures are avoided and high reliability is due to computation technology.

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This chapter covers the main contents like the current trend, challenges and future practices of cloud computing. By the increasing usage of handheld devices is directly proportional to its power consumption which leads to many other factors such as memory management and less computational power. As by the time internet and technology is increasing every person would prefer to do his work by using fewer resources. Cloud computing meet their needs as they required because everything is on cloud distributed and virtualized. According to some research base mobile applications are estimated to rise 88% per annum from 2009 to 2014 (J. G. Ruay-Shiung Chang et al. 2013).

MCC has made our life easier in an effective way. Handheld devices along with internet connections made life more comfortable. With this technology we can move our more intensive tasks on cloud. To comprehend the main challenges in Mobile Cloud Computing one should get the domain knowledge and deep understandings of cloud computing.

This section displays the distributed computing, base in cloud flow examination patterns and issues identified with Mobile Cloud Computing. The Mobile Cloud Computing comprises of cloud, portable, processing gadget and remote channels, and asset suppliers. Point of MCC is to give clients straightforwardness so they can get everything on their cell phones with unwavering quality. It gives administrations like programming on the cloud, handling force, financially savvy arrangements and dependability and accessibility. In its most straightforward structure, MCC is a structure where capacity and handling of registering happens outside cell phone; though, assets can be investigated on the portable. There are numerous distributed computing applications. A standout amongst the most unmistakable employments of Mobile Cloud Computing is in e-business where one can offer or purchase things through their cell phones. These errands incorporate online installment, ticketing and bank exchanges and so on. There are a few confinements with this methodology like security issue, system idleness and so forth. E-learning or virtual learning is an essential commitment to training by this innovation. Cloud make it less demanding so that addresses features, presentations everything is accessible on the cloud. Cloud versatile figuring has sway on medicinal area too, one can without much of a stretch take assistance from specialists siting a large number of miles away; this is conceivable because of cloud adjustment in diverse parts.

Distributed computing has sway on portable keeping money and versatile recreations and so on (A. B. E. Cuervo et al.2010). With the approach of PDAs and their backing for expansive applications like computer games, picture preparing and e-keeping money and so on. Their many-sided quality and interest of computational assets is expanded. There is still sure application that requests a major computational power and telephones react moderate (P. B. M. Satyanarayanan et al.2009). To take care of this issue industry need to consider and change programming or equipment to satisfy it prerequisites (C. Mascolo, 2010). Equipment assets can’t be improved because of configuration issues however programming should be possible. Calculation change is a strategy where we can move our reckoning undertaking on the cloud. Change of the processing on the cloud improves the execution of the application and tackles the issue of battery utilization and permits us to run application that is not able to keep running on cell phones. (Amazon, 2011) Numerous utilizations of distinctive area have moved their backing on cloud, for example, (T. P. X. Yang and and J. Shen, 2010), healthcare (T. P. a. I. M. C. Doukas, 2010) and business.

Many distributions point out the centrality of MCC. Creator examines two models and presents a method to proficiently get to the assets (R. F. a. I. Khalife, 2011). Creators exhibited the difficulties in the field of versatile cloud. This section shows the late improvement in MCC and stress on difficulties and future patterns. This section likewise (C. L. H. T. Dinh et al.2011) and (X. K. L. Guan et al.2011) exhibits the contrasts in the middle of cloud and portable cloud structural planning and components influencing the Mobile Cloud Computing on the cloud. In the future we discuss different topics like
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